

Abstract

A transfer system for use with a tool for processing a work-piece at low or vacuum pressure such as an ion implanter for implanting silicon wafers. An enclosure defines a low pressure region for processing of work-pieces placed at a work-piece processing station within the low pressure region. A two tier multiple work-piece isolation load lock transfers work-pieces from a higher pressure region to the lower pressure for processing and back to said higher pressure subsequent to said processing. A first robot transfers work-pieces within the low pressure region from the load locks to a processing station within the low pressure region. Multiple other robots positioned outside the low pressure region transfers work-pieces to and from the two tier work-piece isolation load locks from a source of said work-pieces prior to processing and to a destination of said work-pieces after said processing.